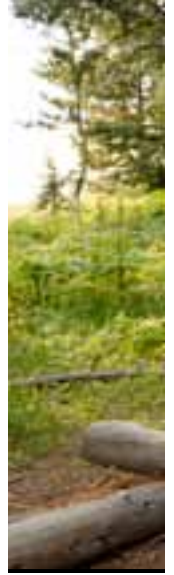


New Interactive Mapping Opportunities Increase Communication Efforts and Improve Access

By Beth Shumate and Bruce Newell



The Helena Livability Group, a group initially convened by Montana Fish, Wildlife, and Parks, is comprised of a group of diverse organizations, professionals and concerned citizens. The group was created to: enhance and protect the quality of life and local economy of rural and urban communities; support integrated regional planning; and promote livable communities by cultivating partnerships throughout Lewis and Clark County. The idea of providing multi-agency, online, interactive trail maps was initially discussed in a summer 2010 Helena Livability meeting. Those attending were discussing possible strategies for improving the quality of life in Helena through cooperation between government entities and organizations and groups involved with outdoor recreation, parks, land-use management, healthcare, and education.

Parks, recreation sites and trails are significant community assets that provide opportunities for people to lead healthier lifestyles and create more active, vibrant communities across Montana. However, in order to increase visitation and outdoor recreational pursuits, people need better access to helpful information concerning trail routes, parks and management agencies. People often experience difficulty in identifying trail routes or trailhead locations since land is typically owned in a checkerboard fashion and trail users are required to purchase various maps to determine land ownership, trail connections and seasonal closures.

Introduction and Basis for Project Development

Often times it is difficult to know how to access a trail or to determine if a trail is open at certain times of the year due to a patchwork of land-managing agencies that all provide various types of maps that are often expensive and outdated. Concerned about these issues, a mapping sub-committee formed out of the original Livability Group to consider approaches to maximize communication and accessibility. The mapping sub-committee discussed the importance of local trails, the challenges managers face in managing and maintaining trails and trail systems, and trail user's desire to access an updated online map that displays all Helena-area managed trails.

Goals and Methodology

Overall, the primary mission of the mapping sub-committee is to provide information services and create an interactive online map that allows community members, organizations, local citizens and tourists access to a user-friendly mapping system providing greater access to resources, recreational attributes and local opportunities.

One of the key goals of the sub-committee was to develop an information "clearing house", allowing users to query a variety of information such as area trail and recreation maps, commuter and transit routes, current events and links to other entities or organizations involved in promoting enhanced livability.

By utilizing innovative strategies and incorporating advanced technological methods, an interactive clearing house of information was developed as a cooperative pilot project, based in Lewis and Clark County, Montana. A number of agencies cooperated to create this map including: City of Helena, Lewis & Clark County, Prickly Pear Land Trust (PPLT), Helena National Forest (USFS), Montana Fish, Wildlife, and Parks (FWP), Montana State Library, Montana Geographic Information Clearing House, Montana Department of Administration Base Map Service Center (MTBMSC), Adventure Cycling Association, Broadwater County, and Jefferson County.

The pilot Helena Area Trails Mapping Project focuses on maintained paths within 30-40 miles of Helena, an area bordered by the Continental Divide to the west, I-15 near Basin to the south, the Big Belt Mountains to the east, and Stemple Pass to the north. Lewis and Clark County officials compiled trail and trail head data from the various agencies: City of Helena; PPLT; USFS; FWP; and, MTBMSC. This spatial trail data was then overlaid to existing web services representing topography, aerial imagery, and street level base maps. The spatial representations of trails are combined with current available metadata which includes trail descriptions and features, access information and seasonal limitations.

Leveraging an existing web mapping application at the County, the online trail maps were implemented (in beta version) following three or four meetings

attended by trail managers and geographical information system (GIS) providers. Helena's Parks and Recreation Department generously donated employees' time and services, enabling the Helena Trails Map to be made available and managed by the City of Helena's and Lewis & Clark County's joint Information Technology Services Department. Lewis and Clark County GIS Coordinator Eric Spangenberg, and Parks and Recreation Department's Greta Dige were key players in developing the interactive map. These meetings were distinguished by the willingness of trail-managers to collaborate and share trails data and cooperatively provide an integrated online map. The Helena trails map site was announced to the public in May, 2011 and is available online.¹

Outcomes and Future Plans

The first phase of the interactive map is available online and currently offers a new Microsoft Silverlight version that includes more latitude/longitude viewing options.² Alternatively, access is available through the non-Silverlight version map.³ This online one-stop-shop for Helena-area trails supplements existing printed maps and guidebooks. The online interactive map provides hikers, runners, cyclists, and equestrians with a free, online map of nearby non-motorized trails. Included on the online topographical base map are hundreds of trails managed by the City of Helena, Prickly Pear Land Trust, the Helena National Forest, and Montana Fish, Wildlife and Parks. Trailheads are identified, as well as all city streets and bike routes. The overarching goal is for the least experienced recreationist to be able to enjoy and benefit from the content available within the interactive trails map.

The interactive online map will potentially provide the end-user with destination information while providing

an efficient means to find trails, recreational sites and trail-related information throughout the greater Helena area. As the project expands, the committee hopes to incorporate various end-user needs so anyone can access detailed information and discover the true sense of the Helena region and all that it has to offer. The final phase of the interactive mapping project will provide a GPS-enabled trails map guide that has the potential to incorporate detailed metadata informing the inquirer of seasonal closures, trail conditions, availability of trailhead and trailside amenities, and trail use types. Eventually, the goal is to allow users to interact with the site by rating the trails, communicating with other commuters for routes and drop-off locations and incorporating additional metadata.

Ultimately, the map project could lead to a statewide interactive map that allows the end-user to access a user-friendly mapping service providing information on: local and regional recreation-based activities; social events and area activities; commuter routes; and links on ways to become more involved with local livability-focused groups. Providing accurate and timely information to interested users regarding public lands and trail systems could increase visitation and public involvement, and is likely to increase community support for parks and trails, boost local economies, and promote healthier and more active communities.

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Interactive mapping sites page from the Montana Lewis and Clark County website, www.co.lewis-clark.mt.us

- 1 http://helenair.com/lifestyles/article_12ea5500-8cdf-11e0-b6ca-001cc4c03286.html
- 2 <http://www.co.lewis-clark.mt.us/departments/information-technology/gis-maps/wwwhelenamontanamapsorg/launch-map-viewers-services.html>
- 3 <http://helenamontanamaps.org/trails>.

